

COMMITTEE ON SCIENCE
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The National Nanotechnology Initiative: Review and Outlook

May 18, 2005

Statement of Chairman Bob Inglis

Welcome. It's good of you to come to this hearing at the Research Subcommittee on a topic of such *small* significance. I say that, of course, because what we're talking about here—science at the nanometer scale—starts at a size $1/75,000^{\text{th}}$ of the width of a human hair. We're here to learn about nanotechnology, and I'm excited to hear what our witnesses will have to say, so I'll keep this opening statement small as well.

I also want to welcome our Ranking Member, Ms. Hooley. I was encouraged by her insightful questions in our last Research Subcommittee hearing, and I'm looking forward to what she will contribute to this hearing.

I'm not a scientist by background, and I've got to confess that I didn't know enough about this subject until I had to prepare for this hearing. I'm not alone. A recent survey by MIT's Technology review showed that more than half of all Americans have no familiarity with nanotechnology. That's a shame, because these technologies are changing the products we use, and have the potential to revitalize our manufacturing base. We must be about educating our children in the math and science they will need to do these jobs. I know Ms. Hooley, being a former teacher, has a lot to say about this.

This morning, the President's Council of Advisors on Science and Technology released a report on the state of, and outlook for, nanotechnology in the U.S. On the whole, the report is very encouraging, noting that we lead the world by most metrics, including funding, patents, and scientific publications. But one of the things I find troubling is that other countries are catching up, and not just in funding. I hope we can talk today about ways the U.S. can maintain its status as a world leader in these emerging technologies.

For those of us who are technologically challenged—like me—nanotechnology is the manipulating of matter at the molecular level to get results that just don't occur in larger lumps of atoms. It promises to impact virtually every field—with applications in fields from energy to defense to health care to transportation. You can end up with things like gold-covered nanoshells to target and burn cancer away, or light-weight, super-strong materials structured at the smallest levels that could increase the efficiency of our airplanes and automobiles.

Our experts can talk more about nanotechnology's implications, but what we really want to know is how to get it into the products we will use in the future. Nanotechnology is one of the few technologies where basic research meets the marketplace in venture-capital startups and R&D at large firms. The witnesses here today will bring the process to life and let us in government know how we're helping and how we're we may be hurting advances in this very promising area.